Claims

1. *(Original)* A seed layer structure for a hard magnetic material, comprising:

a) at least a first underlayer and a second underlayer located above said first underlayer;

b) at least a first interlayer located between said first underlayer and said second underlayer; and

c) a hard magnetic material located above said second underlayer.

2. *(Original)* The seed layer structure in claim 1 further comprising a third underlayer and a second interlayer each located above said second underlayer and below said hard magnetic material, wherein said second interlayer is located between said second underlayer and said third underlayer.

3. *(Original)* The seed layer structure in claim 2 further comprising a fourth underlayer and a third interlayer each located above said third underlayer and below said hard magnetic material, wherein said third interlayer is located between said third underlayer and said fourth underlayer.

4. *(Original)* The seed layer structure in claim 1 further comprising a plurality of alternating underlayers and interlayers each located above said second underlayer and below said hard magnetic material.

5. *(Original)* The seed layer structure in claim 1 wherein said first underlayer and said second underlayer are Cr.

6. *(Original)* The seed layer structure in claim 1 wherein said first underlayer and said second underlayer are an alloy selected from the group consisting of Cr_xMo_{1-x}, Cr_xMn_{1-x}, $CrxTi_{1-x}$ and Cr_xV_{1-x}.

7. *(Original)* The seed layer structure in claim 1 wherein said first interlayer is an oxide.

8. *(Original)* The seed layer structure in claim 7 wherein said oxide is selected from the group consisting of oxides of aluminum, oxides of tantalum, oxides of silicon and oxides of hafnium.

9. *(Original)* The seed layer structure in claim 1 wherein thickness of said first underlayer and thickness of said second underlayer are each substantially greater than 3 nm.

10. *(Original)* The seed layer structure in claim 1 wherein thickness of said first interlayer is substantially between 0.1 nm and 10 nm.

11. *(Original)* The seed layer structure in claim 1 wherein said hard magnetic material provides longitudinal bias to a ferromagnetic layer in a magnetic sensor.

12. *(Original)* The seed layer structure in claim 11 wherein said magnetic sensor is a giant magnetoresistive sensor.

13. *(Original)* The seed layer structure in claim 11 wherein said magnetic sensor is a tunnel valve sensor.

14. *(Original)* The seed layer structure in claim 11 wherein said magnetic sensor is an anisotropic magnetoresistive sensor.

15. *(Original)* The seed layer structure in claim 11 wherein said magnetic sensor is selected from the group consisting of top spin valve sensors, bottom spin valve sensors, giant magnetoresistive sensors, tunnel valve sensors and anisotropic magnetoresistive sensors.

Claims 16-29 inclusive: *Canceled*